

# Cybersecurity Resilience

## Securing the Infrastructures that Secure Healthcare & Public Health



**The National Health ISAC**





**National Level - Critical Infrastructure Cybersecurity Resilience**

**National Information Sharing & Analysis (ISAC) Infrastructure**

**National Health ISAC (NH-ISAC)**

**Global Cyber Range (CGR)**



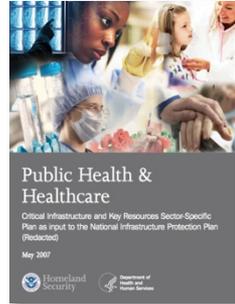
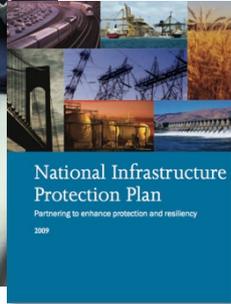
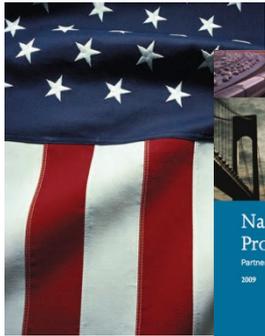
# What is Critical Infrastructure?

***“Systems and Assets, Whether Physical or Virtual So Vital to the United States  
That the Incapacity or Destruction of Such Systems and Assets  
Would Have a Debilitating Impact On  
Security, National Economic Security, National Public Health or Safety”***



***Close to 90% of the  
Nation’s Critical Infrastructures  
Are Owned and Operated  
By the Private Sector***

# National Critical Infrastructures



**Presidential Directive**

**Identify, Prioritize, Protect**

**National Critical Infrastructures & Key Resources (CI/KR)**

**National Infrastructure Protection Plan (NIPP)**

**Protection Efforts and Resiliency**

**Sector-Specific Agencies (SSAs) + Plans**

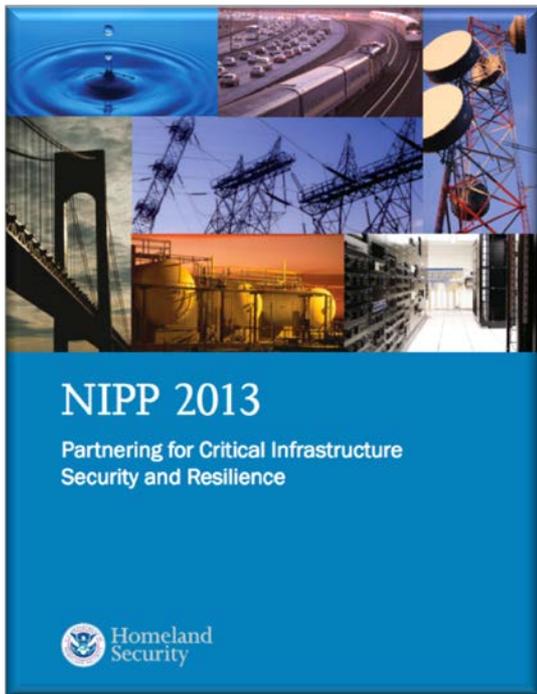
**Information Sharing & Analysis Centers (ISACs)**

Sector-Specific Agency (SSA)	Critical Infrastructures & Key Resources
Department Of Agriculture Department of Health & Human Services	Agriculture & Food
Department of Defense	Defense Industrial Base
Department of Energy	Energy
<b><u>Department of Health &amp; Human Services</u></b>	<b><u>Healthcare &amp; Public Health</u></b>
Department of the Interior	National Monuments and Icons
Department of the Treasury	Banking & Finance
Environmental Protection Agency	Water
Department of Homeland Security (DHS) Office of Infrastructure Protection	Chemical / Commercial Facilities / Dams Critical Manufacturing /Emergency Services Nuclear Reactors, Materials and Waste
DHS Office of Cybersecurity & Communications	Information Technology Communications
DHS Transportation Security Administration	Postal and Shipping
DHS Transportation Security Administration United States Coast Guard	Transportation Systems
DHS Immigration & Customs Enforcement, Federal Protective Service	Government Facilities



## Managing Risks from Significant Threats and Hazards to Physical and Cyber Critical Infrastructures

### Requires an Integrated Approach Across a Trusted Diverse Community



Identify, Deter, Detect, Disrupt and Prepare for Threats and Hazards

Reduce Vulnerabilities of Critical Assets, Systems and Networks

Mitigate the Potential Consequences to Critical Infrastructure of Incidents or Adverse Events



## National Information Sharing & Analysis Centers (ISACs)

*As defined by the National Infrastructure Protection Plan (NIPP)*

*“ISACs are privately-led sector-specific organizations advancing physical and cyber security critical infrastructure and key resources (CI/KR) protection by establishing and maintaining collaborative frameworks for operational interaction between and among members and external partners.”*

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## ISACs – Cybersecurity Tactical + Operational Arm – Nationally Recognized

Sector-Specific Federal Agency (SSA), Sector-Coordinating Council (SCC), Intelligence Agencies (DHS, FBI),

The National Council of ISACs and critical infrastructure owners/operators.

Security Intelligence - Sector-and Cross-Sector Situational Awareness Information Sharing

Threats and Vulnerabilities, Incident Response, Leading Practice and Education

Establishing Operational-Level Dialogue with Appropriate Government Agencies



***Formed in Response to a  
Presidential Directive***

***Private-Sector Led***

***Nationally Recognized***

**Federal Sector-Specific Agency (SSA)**

**Sector's Coordinating Council (SCC)**

**Intelligence Agencies (DHS, FBI, NSA)**

**National Council of ISACs**

**Critical Infrastructure Owners and Operators.**

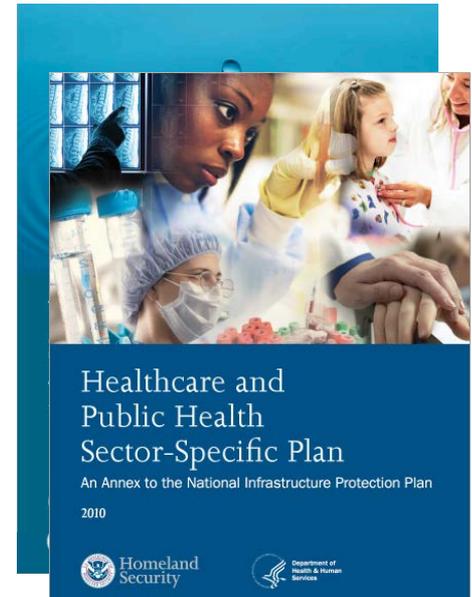
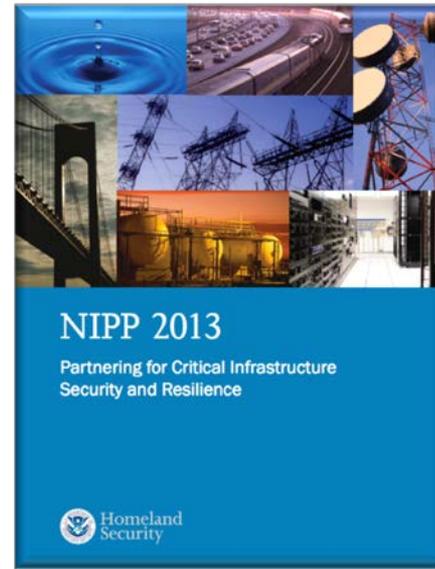




# National Critical Infrastructure Resilience

## Official Public/Private Critical Infrastructure Resilience Infrastructure – Collective Action

- US Dept. Homeland Security
- Federal Sector-Specific Agencies (SSA)
- Coordinating Councils (SCC)
  - Government Coordinating Council (GCC)
  - (Private) Sector Coordinating Council (SCC)
- Information Sharing & Analysis Centers (ISACs)
- Cross-Sector Cybersecurity Working Group
- Unified Cyber Coordination Group
- Federal Senior Leadership Council (FSLC)
- State/Local/Tribal/Territorial (SLTTGCC)
- Regional Consortium Coordinating Council (RC3)



## Presidential Policy Directive PPD-21



## National Response Framework

January 2008



### EMERGENCY SUPPORT FUNCTIONS / COORDINATORS

ESF #1 – Transportation (Dept. of Transportation)

ESF #2 – Communications (DHS)

ESF #3 – Public Works and Engineering (DoD)

ESF #4 – Firefighting (Dept. of Agriculture – US Forest Service)

ESF #5 – Emergency Management (DHS – FEMA)

ESF # 6 – Mass Care, Emergency Assistance, Housing/Human Services (DHS – FEMA)

ESF #7 – Logistics Management and Resource Support – (GSA and DHS (FEMA)

**ESF # 8 – Public Health and Medical Services – (Dept. Health and Human Services)**

ESF # 9 – Search and Rescue (DHS – FEMA)

ESF #10 – Oil and Hazardous Materials Response – EPA

ESF #11 – Agriculture and Natural Resources – Dept. of Agriculture

ESF # 12 – Energy – Dept. of Energy

ESF # 13 – Public Safety and Security – Dept. of Justice

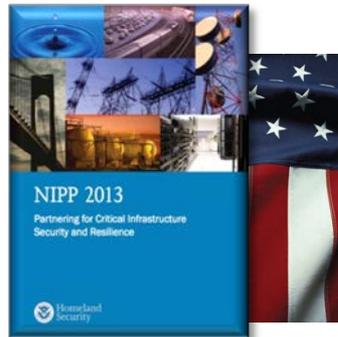
ESF # 14 – Long-Term Community Recovery (DHS – FEMA)

ESF # 15 – External Affairs (DHS)

# Private Sector Collaboration and Coordination



**National Critical Infrastructures + Key Resources (CI/KR)**



**Federal Sector-Specific Agencies (SSAs)**

**Coordinating Councils**

**Government Coordinating Council (GCC)**

**Sector Coordinating Council (SCC) - Private Sector**

*Private Sector*

**Critical Infrastructure Owners/Operators**

**National Information Sharing & Analysis Centers (ISACs)**



the WHITE HOUSE PRESIDENT BARACK OBAMA ★★★★★ THE WHITE HOUSE WASHINGTON ★★★★★ the ADMINISTRATION

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The White House

Office of the Press Secretary



For Immediate Release

February 12, 2013

## Presidential Policy Directive -- Critical Infrastructure Security and Resilience

[PRESIDENTIAL POLICY DIRECTIVE/PPD-21](#)

SUBJECT: Critical Infrastructure Security and Resilience

The Presidential Policy Directive (PPD) on Critical Infrastructure Security and Resilience advances a national unity of effort to strengthen and maintain secure, functioning, and resilient critical infrastructure.

the WHITE HOUSE PRESIDENT BARACK OBAMA ★★★★★ THE WHITE HOUSE WASHINGTON ★★★★★ the ADMINISTRATION

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The White House

Office of the Press Secretary



For Immediate Release

February 12, 2013

## Executive Order -- Improving Critical Infrastructure Cybersecurity

EXECUTIVE ORDER

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IMPROVING CRITICAL INFRASTRUCTURE CYBERSECURITY



**NIST**

## Cybersecurity Framework



Executive Order 13636: Cybersecurity Framework

## Executive Order 13636 – Improving Critical Infrastructure Cybersecurity



## Framework for Improving Critical Infrastructure Cybersecurity

Version 1.0

National Institute of Standards and Technology

February 12, 2014



## Framework Core

### **Identify | Protect | Detect | Respond | Recover**

Identify (Systems, Assets, Data, Capabilities)

Protect (Develop and Implement Safeguards)

Detect (Timely Discovery of Cybersecurity Events)

Respond (Develop and Implement Appropriate Action Activities)

Recover (Develop and Implement Resilience Plans – Restore Capabilities)

## Information Sharing & Analysis Centers (ISACs)

The Framework encourages leveraging guidance and trusted security situational awareness intelligence and information sharing mechanisms from the nation's ISAC infrastructure to achieve broader cybersecurity situational awareness intelligence for effective response.



## Framework Profile

**Alignment of Functions, Categories and Subcategories**  
*with*

**Business Requirements, Risk Tolerance and Organization Resources**  
Establishes Reducing Cybersecurity Risk

## Current Profile | Target Profile

Current Profile – Cybersecurity Outcomes Currently Being Achieved

Target Profile – Outcomes Needed to Achieve Cyber Risk Management Goals

## Profile Comparison

Gap Mitigation Cost-Effective Roadmap



U.S. Department of Health and Human Services

**FDA** U.S. Food and Drug Administration  
Protecting and Promoting *Your* Health

A to Z Index | Follow FDA | En Español

Search FDA

Home | Food | Drugs | Medical Devices | Radiation-Emitting Products | Vaccines, Blood & Biologics | Animal & Veterinary | Cosmetics | Tobacco Products

## Medical Devices

Home > Medical Devices > News & Events (Medical Devices) > Workshops & Conferences (Medical Devices)

### News & Events (Medical Devices)

Workshops & Conferences  
(Medical Devices)

2014 Medical Device Meetings and  
Workshops

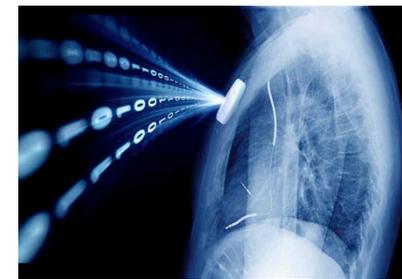
2013 Medical Device Meetings and  
Workshops

Upcoming Medical Device  
Webinars and Stakeholder Calls

## Public Workshop - Collaborative Approaches for Medical Device and Healthcare Cybersecurity, October 21-22, 2014

In recognition of National Cybersecurity Awareness Month, the Food and Drug Administration (FDA) in collaboration with the Department of Health and Human Services (HHS) and the Department of Homeland Security (DHS) is announcing a public workshop "Collaborative Approaches for Medical Device and Healthcare Cybersecurity."

This workshop will bring together all stakeholders in the healthcare and public health (HPH) Sector including but not limited to medical device manufacturers, healthcare facilities and personnel (e.g. healthcare providers, biomedical engineers, IT system administrators), professional and trade organizations (including medical device cybersecurity consortia), insurance providers, cybersecurity researchers, local, State and Federal Governments, and information security firms in order to identify HPH cybersecurity challenges and ways the Sector can work together to address these challenges.







U.S. Department of Health & Human Services

**FDA** U.S. Food and Drug Administration  
Protecting and Promoting *Your* Health

A to Z Index | Follow FDA | En Español

SEARCH

Home | Food | Drugs | Medical Devices | Radiation-Emitting Products | Vaccines, Blood & Biologics | Animal & Veterinary | Cosmetics | Tobacco Products

### About FDA

Home | About FDA | Strategic Partnerships and Intellectual Property | Memoranda of Understanding (MOUs) | Non-Profit MOUs

**225-14-0019**

Strategic Partnerships and Intellectual Property

Memoranda of Understanding (MOUs)

Non-Profit MOUs

MEMORANDUM OF UNDERSTANDING  
BETWEEN THE NATIONAL HEALTH INFORMATION SHARING & ANALYSIS CENTER, INC. (NH-ISAC)  
AND THE  
U.S. FOOD AND DRUG ADMINISTRATION  
CENTER FOR DEVICES AND RADIOLOGICAL HEALTH

I. Purpose:

The United States Food and Drug Administration (FDA)'s Center for Devices and Radiological Health (CDRH) and The National Health Information Sharing & Analysis Center, Inc. (NH-ISAC) have a shared interest in encouraging the identification, mitigation, and prevention of cybersecurity threats to medical devices. Both FDA and NH-ISAC are referred to individually as a "Party" and collectively as the "Parties." This Memorandum of Understanding (MOU) establishes the terms for collaboration to promote this shared interest.

II. Background:

1. FDA is authorized to enforce the Federal Food, Drug, and Cosmetic Act ("the Act") as amended (21 U.S.C. 301). In fulfilling its responsibilities under the Act, FDA among other things, directs its activities toward promoting and protecting the public health by ensuring the safety, efficacy, and security of drugs, biological products, veterinary products, medical devices and radiological products and the safety and security of foods

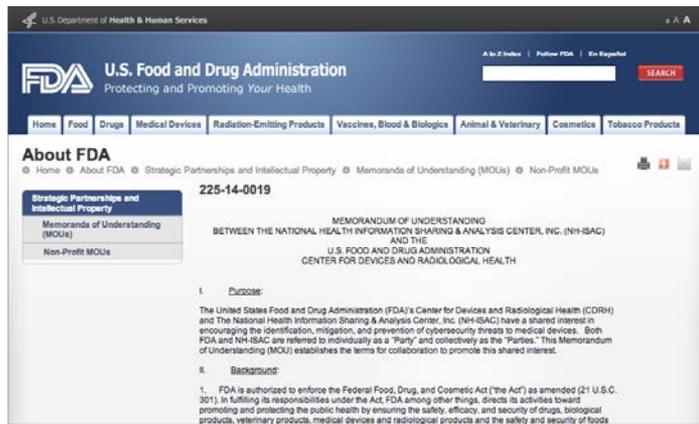


## Proactive Collaboration Goals

Create an environment fostering stakeholder collaboration and communication and encouraging sharing medical device cybersecurity vulnerabilities and the security of surrounding healthcare IT.

Develop awareness of the Volunteer Cyber Framework, operationalize for successful adoption for organizations and products.

Encourage HPH stakeholders to develop innovative strategies to access and mitigate cyber vulnerabilities that affect their products.



Build foundation of trust within the HPH community

Benefit from cybersecurity threat and vulnerability information sharing

Leverage intelligence feeds from other sectors

Timely situational awareness of vulnerabilities and negative consequences for patient safety – share solutions



## Agreement

**FDA** – Establish a mechanism by which cybersecurity vulnerabilities + threats can be shared with NH-ISAC.

### **NO CONFIDENTIAL, COMMERCIAL, TRADE SECRET OR PERSONAL PRIVACY INFORMATION**

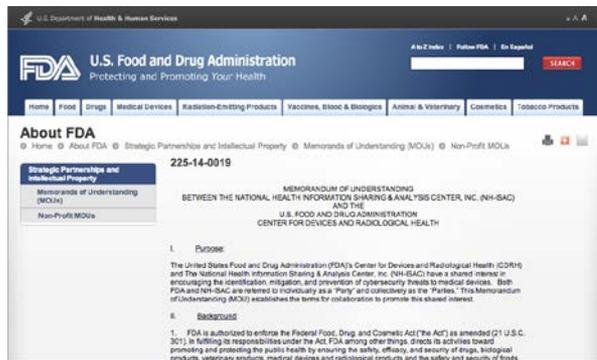
**NH-ISAC** – Work with members to establish a mechanism by which medical device cybersecurity vulnerabilities are shared with the FDA

**FDA + NH-ISAC** – Work together to establish how stakeholders can interface with the FDA (medical device or healthcare cybersecurity vulnerability information sharing)

Collaboration – Inform a risk threshold common understanding upon which exploits of a vulnerability might impact patient safety and/or public health.

Develop a shared understanding of risks posed by medical device cyber vulnerabilities.

Foster development of a shared risk assessment framework to enable stakeholders to consistently and efficiently assess patient safety, address risks and take appropriate mitigation actions.





## NH-ISAC

**Nation's Healthcare & Public Health Critical Infrastructure - Official ISAC**

**National Council of ISACs**

**Health Sector Coordinating Council (GCC/SCC) Executive Committee**

**SCC Chair, Cybersecurity Legislation**

**Appointed by HHS - DHS Cyber Unified Coordination Group (UCG)**

**Representation - DHS National Critical Infrastructure Protection Advisory Council (CIPAC)**

## NH-ISAC MISSION



**To enable, ensure and preserve the public trust by advancing resilience of the Nation's Healthcare and Public Health Critical Infrastructure**

- **Trusted Security Actionable Intelligence**
- **Sector and Cross-Sector Analysis**
- **Early Warnings, Notifications (Physical + Cyber)**
- **Countermeasure Solutions / Incident Response**
- **Fostering the Availability of Proven Security Leading Practice**



US Department of Homeland Security

DHS National Protection and Programs Directorate (NPPD)

Office of Infrastructure Protection (IP)

Lead National Program to Reduce CI/KR Risks

Strengthen National Preparedness, Response and Rapid Recovery



Office of Cybersecurity & Communications

National Cybersecurity Division (NCSA) - Cyber Exercises,  
National Cybersecurity Education

US CERT - Improve, Manage, Coordinate Information Sharing

National Cybersecurity & Communications Integration Center  
(NCCIC)

Government (Fed, State, Local), Intelligence and Law  
Enforcement Communities, Private Sector



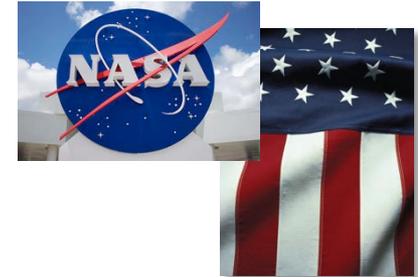
## US DHS / Office of Cybersecurity + Communications

### Cooperative Research and Development Agreement (CRADA)

13-NPPD-008

*“This CRADA Agreement is entered into by and between National Health ISAC (hereinafter referred to as NH-ISAC) and the United States of America, as represented by the National Protection and Programs Directorate (NPPD) Office of Cyber Security and Communications, recognized as a Federal cybersecurity and communications laboratory entity within the Department of Homeland Security*

*The key objective of this Agreement is to enable DHS and NH-ISAC to share cybersecurity, communications reliability and related data and information, conduct analytical collaboration activities and share technical capabilities associated with joint research, development, test and evaluation efforts associated with the security of critical infrastructure networks and systems.”*



**Global Situational Awareness Center (GSAC)**

**Cybersecurity Intelligence, Research and Education Center**



## One Organization's Incident is Everyone's Defense

### Trusted Information Sharing Supports

Collaborative Analysis

Detecting Sector-Specific and Organization-Specific Targeting

Identifying new Techniques, Tactics and Procedures (TTP)

### Information Sharing Issues and Challenges

Today Many Organizations Process Little of the Intelligence Received

Wide Variety of Reporting Sources -

Open Source, Proprietary/Commercial, Government, and Various Formats (Emails, Web Pages, Documents, Datafeed, Physical Meetings)

No Automated Infrastructure for Comprehensive Multisource Sharing

Volume of Information Rapidly Outgrowing Ability for Analysts to Process.





Actionable Security Intelligence



**NH-ISAC SECURITY ALERT – April 23, 2013**

**NATIONAL HEALTHCARE & PUBLIC HEALTH  
SECURITY ALERT  
INFORMATION SHARING REQUEST**

National Health ISAC (NH-ISAC), Global Situational Awareness Center, NASA/Kennedy Space Center

04/23/13, 1:45pm EDT

National Critical Infrastructure - Physical Security Situational Awareness Alert



**NH-ISAC PHYSICAL SECURITY SITUATIONAL AWARENESS ALERT – April 29, 2013**

**BOSTON REGIONAL INTELLIGENCE CENTER  
SITUATIONAL AWARENESS ALERT - STATNAMIC TESTING  
UNCLASSIFIED / FOR NH-ISAC MEMBERS ONLY**

NH-ISAC, Global Situational Awareness Center (GSAC) NASA/Kennedy Space Center

04/29/13

NH-ISAC STR 401.22.2013



**NH-ISAC Security Threat Intelligence Report – April 22, 2013**

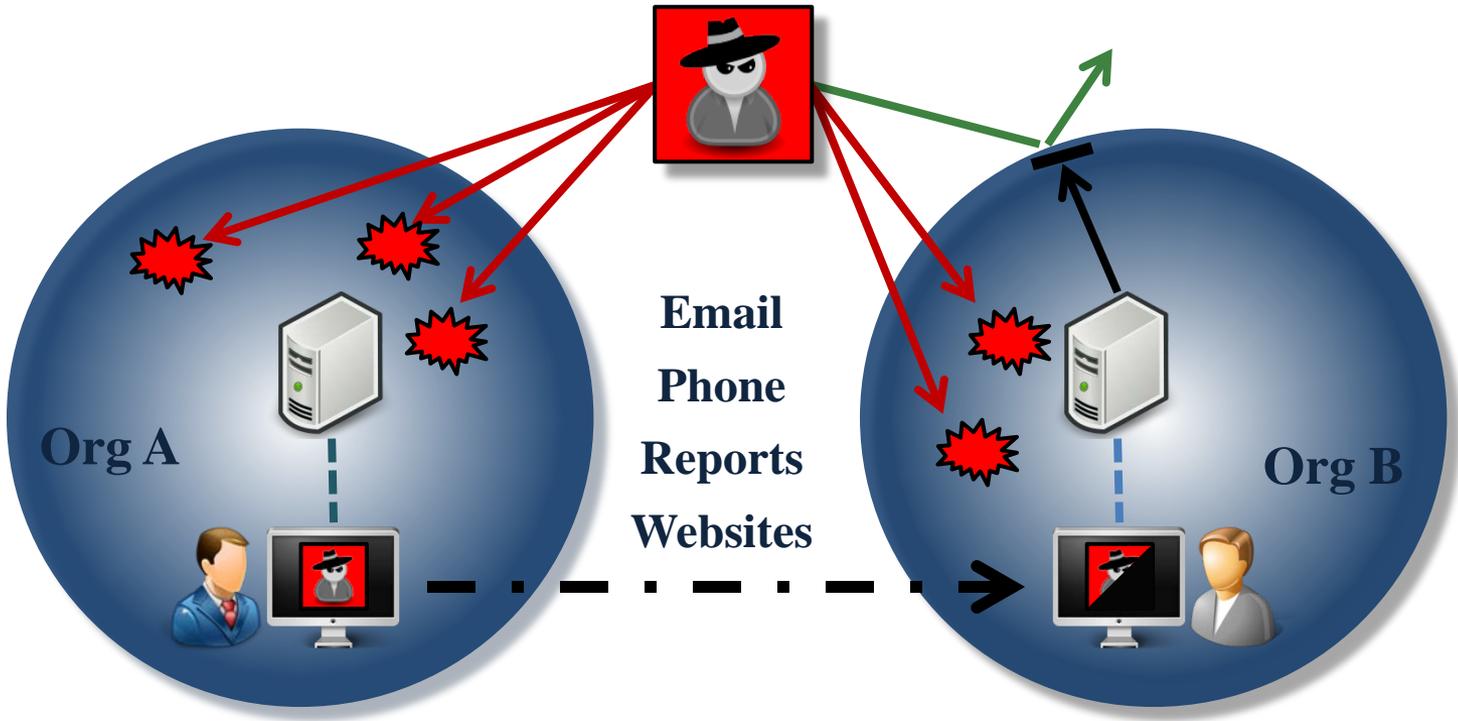
**National Healthcare & Public Health (NHPH)  
Security Intelligence**

National Health ISAC (NH-ISAC), Global Situational Awareness Center, NASA/Kennedy Space Center

04/22/13, 1:45pm EDT



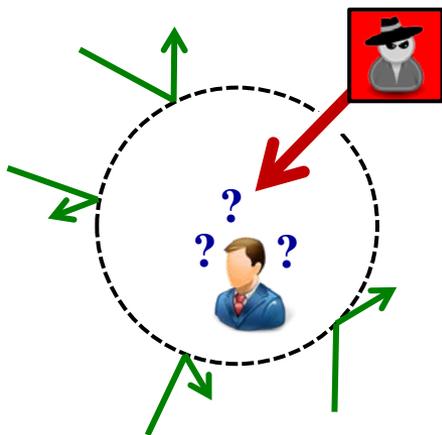
## Using Human Readable Formats with Human-Based Transmission Methods



**On average, it takes 7 man-hours to manually process a single threat intelligence report through all internal analysis and response actions . As a consequence only a fraction of the reports containing actionable intelligence are ever processed.**



## Yesterday's Security



### Network Awareness

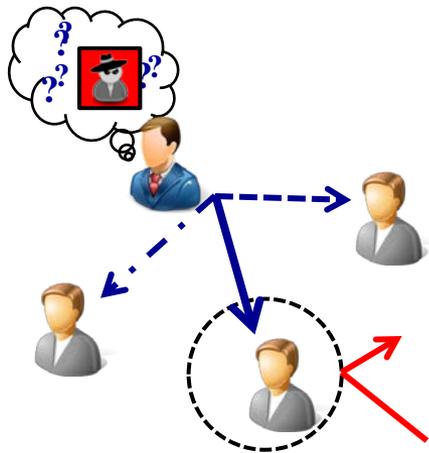
Protect the perimeter and patch the holes to keep out threats and share knowledge internally only.



### Increasing Cyber Risks

- Malicious actors have become much more sophisticated & money driven.
- Losses to US companies now in the tens of millions; WW hundreds of millions.
- Cyber Risks are now ranked #3 overall corporate risk on Lloyd's 2013 Risk Index.

## Today's Problem



### Intelligence Sharing

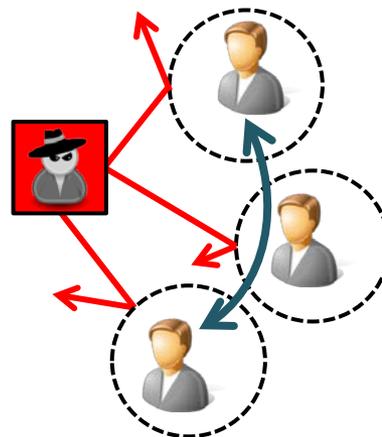
Identify and track threats, incorporate knowledge and share what you know manually to trusted others. Extremely time consuming and ineffective in raising the costs to the attackers.



### Manually Sharing Ineffective

- Expensive because it is slow manual process between people.
- Not all cyber intelligence is processed; probably less than 2% overall = high risk.
- No way to enforce cyber intelligence sharing policy = non-compliance.

## Tomorrow's Solution



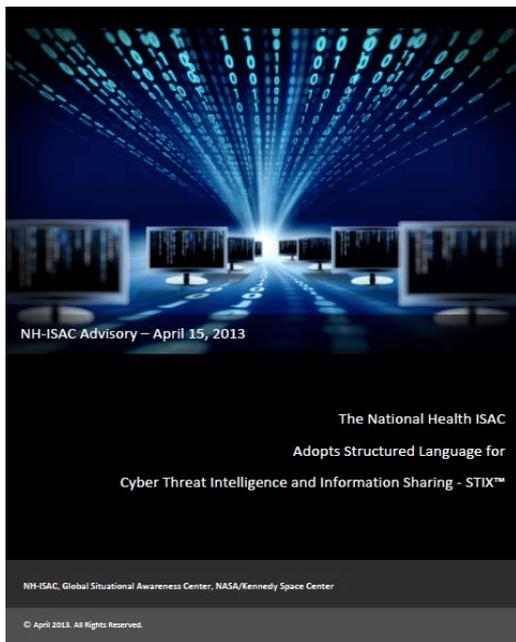
### Situational Awareness

Automate Sharing  
Develop clearer picture from all observers' input and pro-actively mitigate.



### We are Solving the Problem

- Security standards recently matured.
- ISAC's are the trusted source for sharing industry threat intelligence.
- Cyber Intelligence Sharing Platform revolutionizing sharing and utilization of threat intelligence.



## STIX - 8 CORE CONSTRUCTS

- **Cyber Observable** – IP Address, Registry Key Value, File Deletion, etc.
- **Indicator** – Set of related system and network activity
- **Incidents** – Instances of specific adversary actions
- **TTP** – Tactics, Techniques and Procedures
- **Exploit Target** – Something about a potential victim (weakness, vulnerability)
- **Courses of Action** – Prevent, Mitigation, Remediate
- **Cyber Attack Campaigns** – Sets of incidents or TTP with a shared intent
- **Cyber Threat Actors** – Adversary Identification and/or characterization



## TAXII

Trusted Automated eXchange of Indicator Information





# NATIONAL HEALTHCARE & PUBLIC HEALTH CYBERSECURITY RESILIENCE

## Cybersecurity Situational Awareness Intelligence Information Sharing and Coordinated National Response



Global Security Intelligence and Technology Partners  
National Council of ISACs (Sector/Cross Sector Intelligence)  
Government Collaborative Security Intelligence



National Health ISAC (NH-ISAC)  
Global Situational Awareness Center  
Global Institute for Cybersecurity + Research  
NASA/Kennedy Space Center

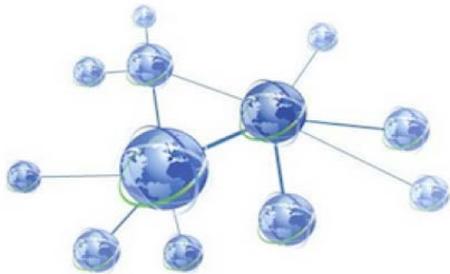




## National Health Cybersecurity Intelligence Information Sharing (NH-CIIS)

All-Hazards (Physical/Cyber) Security Actionable Intelligence

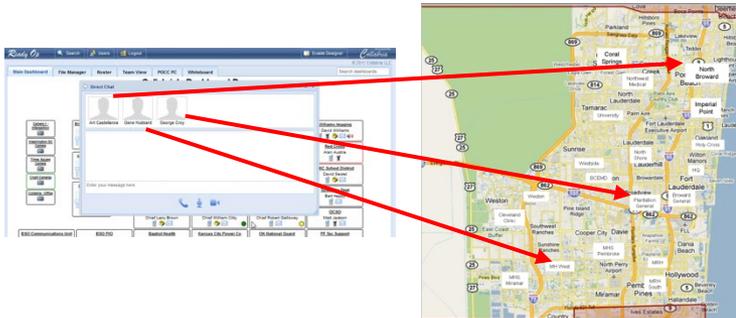
Sector/Cross-Sector Analysis, Reporting, Two-Way Information Sharing



## NH-ISAC Cybersecurity Threat Intelligence Repository

Automated Situational Awareness Actionable Intelligence

Two-Way Information Sharing



## National Health Cybersecurity Communications and Control

Secure Unified Communications and Control Platform

Planning, Managing, Exercising, Coordination, Directing

Instant Communications

Cell / Landline / Text / Email / Secure Voice / Secure Video / Radio



## NH-ISAC ReadyOp

- **Planning, Managing, Communicating and Directing Activities – Unified Command Structure**
- **Nationwide Visual Database of Healthcare and Public Health Security Stakeholders**
- **Instant Nationwide Communications**

**Cell Phone**

**Text**

**Email**

**Secure Voice / Secure Video**

**Radio**





## ReadyOp

The screenshot displays the ReadyOp dashboard interface. At the top, it shows browser tabs for 'AWOLNATION - Burn It Do' and 'iQTouch B', and the URL 'https://dashboard.readyop.com/primary'. The dashboard includes a navigation bar with 'Main Dashboard', 'File Manager', 'Roster', 'Team View', 'POCC PC', and 'Whiteboard'. A central window titled 'Collabria's Dashboard Demo' shows a 'Direct Chat' window with participants 'Mario Moore', 'Gene Hubbard', and 'Art Castellanos'. The chat history includes messages about 'DickTracy' support and a meeting on Tuesdays. Below the chat is a map of Florida with red arrows pointing to specific locations. To the right of the map are several panels, each representing a different agency or department, such as 'EMT', 'Fire Department', 'Police', and 'Hospital', with status indicators and contact information.

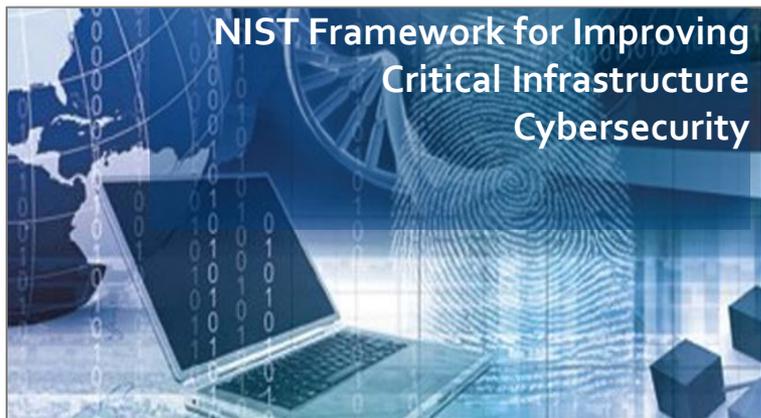


- Alerts
- Event News/Updates
- Immediate Actions
- Instructions
- Response Updates
- Maps
- Requests
- Rosters / Assets
- Emergency Meetings
- Equipment Requests
- Support Needed
- Support Available
- Pictures

### Secure Communications

- Voice
- Text
- Email
- Video
- Radios
- Alerts

# Cybersecurity Resilience – A Three-Tiered Approach





**Global Cyber Range (GCR)**

**CyPro**  
*(Cybersecurity Professional)*

**Training\_Catalog**



**On-Demand 24/7 LIVE Cyber Range Professional Development Environment**

**Access Anywhere with an Internet Connection & Web Browser – No Plug-Ins, No Software**

**Dynamically Access a Host of Virtual Machines - Preconfigured with Vulnerabilities, Exploits, Tools and Scripts**

**Target Machines – Completely Virtualized - Customizable to Simulate Enterprise Networks**

**100% Control of the Environment**



**NASA Center for Lifecycle Design – Modeling & Simulation**

**Secure Design Integration, Cyber Exercise Scenarios**



## CYBER FIRST RESPONDER (CFR)

### ALIGNMENT OF

CYBER + PHYSICAL RESPONSE PROTOCOLS = ALL HAZARDS

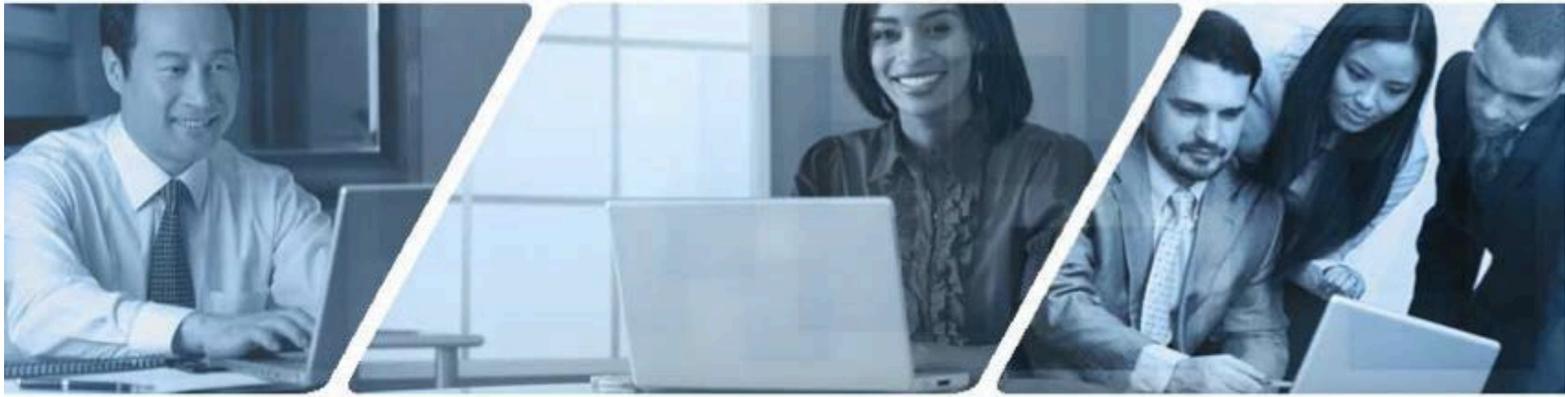
*(Organizational, Sector, Cross-Sector, Government)*

Education | Certification



# NICE

NATIONAL INITIATIVE FOR **CYBERSECURITY** EDUCATION



***National Initiative for Cybersecurity Education***

**NICE**  
NATIONAL INITIATIVE FOR  
**CYBERSECURITY** EDUCATION

## The Framework establishes:

- A common taxonomy and lexicon which organizes cybersecurity into 31 specialty areas within 7 categories.
- A baseline of tasks, specialty areas, and knowledge, skills and abilities (KSAs) associated with cybersecurity professionals.

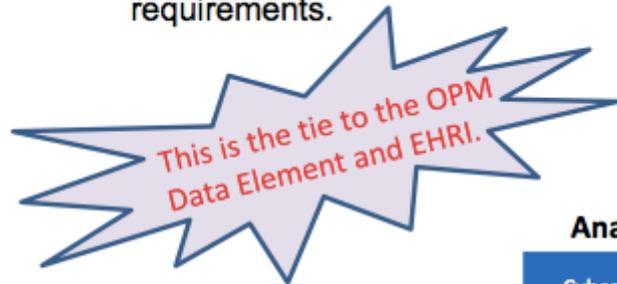
The Framework assists with strategic human capital efforts, including:

- Workforce Planning
- Recruitment and Selection
- Training and Development
- Succession Planning



# Framework Categories and Specialty Areas

- The Framework's 31 Specialty Areas (SA), organized into 7 Categories, encompass the entirety of national cybersecurity work.
- Organizations can use the SAs to identify, build, and customize cybersecurity roles based on mission requirements.



		Analyze	Protect and Defend	Oversight and Development	Operate and Maintain	Securely Provision
	<b>Collect and Operate</b>	Cyber Threat Analysis	Computer Network Defense (CND)	Legal Advice and Advocacy	System Administration	Systems Requirement Planning
	Collection Operations	All Source Intelligence	Vulnerability Assessment and Management	Education and Training	Network Services	Systems Development
<b>Investigate</b>				Strategic Planning and Policy	Customer Service and Technical Support	Software Assurance and Security Engineering
Digital Forensics	Cyber Operations Planning	Targets	Incident Response	Information Systems Security Operations	Systems Security Analysis	Technology Research and Development
Investigation	Cyber Operations	Exploitation Analysis	CND Incident Response	Security Program Management (CISO)	Data Administration	Test and Evaluation
					Knowledge Management	Systems Security Architecture
						Information Assurance (IA) Compliance



Contact



## Welcome to the Global Cyber Range (GCR)

Are you a new user? [Create an account](#) to register you access code and get started. Make sure you have your access code handy before registering!

Already have an account with GICSR's National Cyber Range? Simply log into your existing account to register a new access code or begin a new session.

### Login

Username:

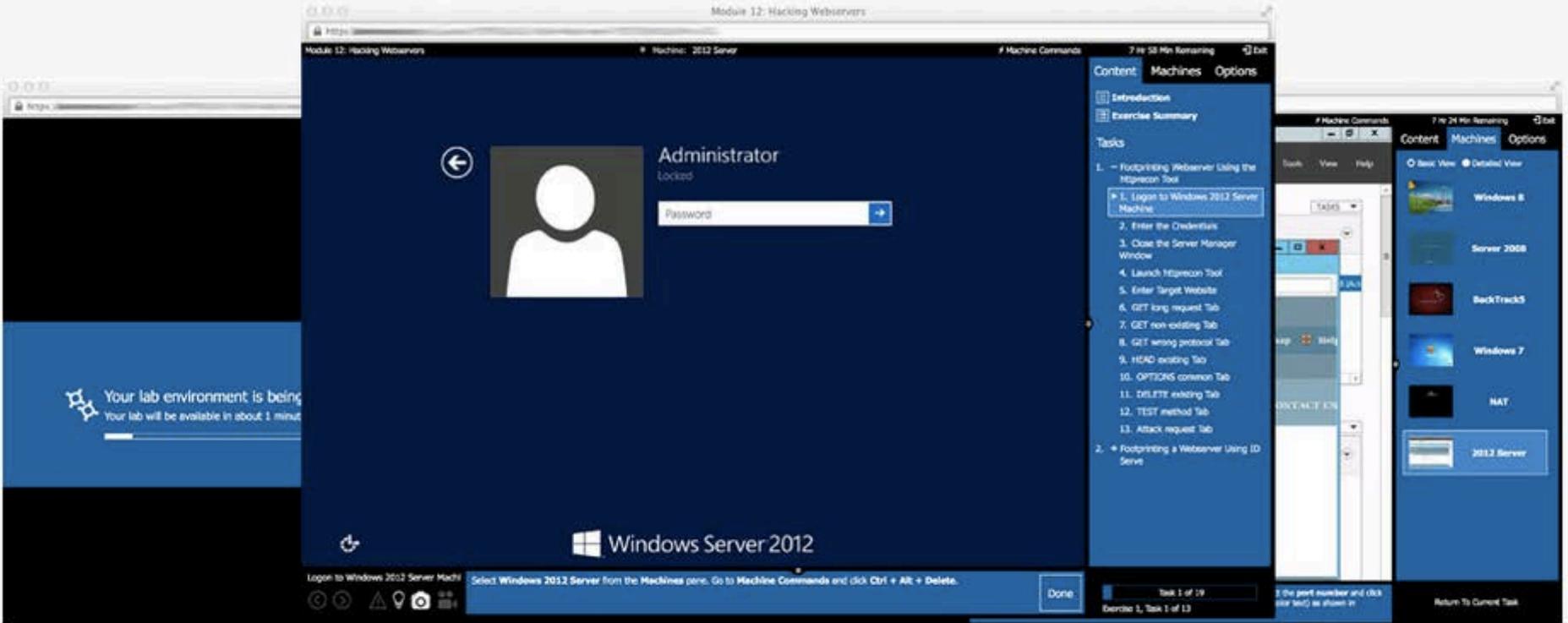
Password:

[Create an Account](#)

[Forget Your Password?](#)

**Cloud-Based | 100% Automated “ 100% Virtualization  
Accessible Anywhere – Via Internet Connection  
Instant Connectivity to all Range Labs**

**Access to Real-World Tools and Scenarios  
After Log-In – Full Access to Preconfigured Targets, Networks and Attack Tools**



**Preconfigured Vulnerable Websites | Hidden Victim Machines**

**Vulnerable, Unpatched Operating Systems**

**Fully Networked Environments**

**Forensic Cast Files and Hard Disks**

# Start

Student 

### Overview

#### Machines

Basic View  Detailed View



**Windows 8**

OS: Windows 8  
Username: Administrator  
Password: Pa\$\$w0rd

DVD Drive:



**Server 2008**

OS: Windows 8  
Username: Administrator  
Password: Pa\$\$w0rd

DVD Drive:



**Windows 7**

OS: Windows 7  
Username: Administrator  
Password: Pa\$\$w0rd

DVD Drive:

#### Resources

Options

 Mail	 Calendar	 Internet Explorer	 Store <b>15</b>	 Bing
 People	 Photos	 Maps	 SkyDrive	 Budapest
 Messaging	 Finance	 Sports	 Games	
				



## Planning

Awareness – Interdependencies (Enterprise, Sector and Cross-Sector)

Public/Private Proactive Response | Critical Functions Resiliency

## Forming Partnerships

Delivering Protection, Prevention, Mitigation, Response & Recovery

Mutual Aid Agreements – Eliminating Barriers

## Sharing Information

Cyber Threat Two-Way Information Sharing

Security Intelligence – Technical Expertise – R&D

## Managing Risk

Sector-Specific Risk Landscapes – Enterprise – Sector – Cross-Sector

Threat and Vulnerability Risk Reduction | Leading Practice

Education (Awareness / Workforce Education)





***YOUR OPPORTUNITY TO ENGAGE WITH A DEFINING VOICE IS NOW!***

**National Health ISAC (NH-ISAC)**

**Global Situational Awareness Center**

**NASA/ Kennedy Space Center**

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